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ABSTRACT

Researchers examined the attitudes that Australian vocational education and training students and teachers hold about generic skills. Data were collected through interviews with 25 technical and further education (TAFE) senior managers and teachers from 4 states, 3 focus groups with a total of 25 TAFE students in Queensland, and surveys of teachers and students in 9 TAFE institutions that resulted in 105 responses from teachers and 755 responses from students. Although most of the teachers believed that they had explained the importance of generic skills to their students, 80% believed that their students were more focused on learning skills directly related to their future job/industry. The teachers and students generally agreed on which generic skills industry considers important, which generic skills are taught well, and which are taught poorly. According to the teachers interviewed and surveyed, the following strategies could improve focus on generic skills: (1) separate training modules for teaching generic skills; (2) better promotion of generic skills' importance; (3) development of teachers with higher levels of knowledge and experience in teaching generic skills; (4) more explicit profiling of generic skills within training packages; and (5) improvements in how generic skills are explained and assessed. (The bibliography lists 30 references. The teacher and student interview schedules and questionnaires and 17 tables are appended.) (MN)

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Generic skills

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Victor J Callan

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Executive summary

The aim of this project was to find out the attitudes students undertaking vocational education and training (VET) courses and their teachers have about generic skills. Specifically, the project investigated:

- the extent to which generic skills are valued by students and VET teachers, and why
- how generic skills are being facilitated through VET subjects and courses, and in traineeships and apprenticeships.

Methods

The research involved collecting data through:

- interviews with a sample of 25 technical and further education (TAFE) senior managers and teachers in four States (New South Wales, Queensland, Victoria and South Australia)
- three focus groups with a total of 25 students on TAFE campuses in Queensland
- a survey of teachers in nine TAFE institutions which resulted in 105 responses
- a survey of students in nine TAFE institutions which resulted in 755 responses.

Main findings

Awareness of generic skills

While teachers had no agreed-upon definition of generic skills, more than three-quarters of them knew and fully understood the terms generic skills, transferable skills, work skills, life skills and employability skills. They indicated considerably lower levels of recognition of terms such as Mayer competencies[1], soft skills and hard skills (about 40%).

At least three-quarters of the student sample had heard of the terms key competencies and employability skills. The 'top-of-the-mind' generic skills mentioned by students in the focus groups included the need to have good communication and team skills and an ability to work with others.

Attitudes about generic skills

The vast majority of teachers believed that they explained to students the importance of learning generic skills and how they were to be assessed; and they believed students understood this information. In the survey, 80% of teachers, however, believed that students were more focussed upon learning skills directly related to the industry in which they wanted to work than on learning

[1] The Mayer committee developed a list of seven key competencies considered essential for employment, further education and life. These competencies resulted from extensive consultation with the school, VET and university sectors and the business community.

generic skills. In the interviews, teachers considered that traineeship and apprenticeship students were more likely than other students to have this greater focus on developing technical skills. They also believed that full-time students straight out of Year 12 understood that future employers wanted employees with broad general or people skills as well as good technical skills.

Most students surveyed said they wanted to learn broader skills that would allow them to change jobs. But more than half of them also said they wanted to learn only skills that were relevant to the industry they wanted to work in. This finding generally supports the opinions among teachers that students are often narrowly focussed upon the more technical skills, and do not fully appreciate the value of generic skills.

The importance of generic skills

When interviewed, teachers said that employers want graduating students who have core skills that are transferable from one job or position to another, and good interpersonal and team skills so that they can add value from their first day at work. Most teachers believed that employers are most dissatisfied with the interpersonal, team and general communication skills of recent graduates from the VET system, as well as with their job attitudes.

The surveyed teachers and students generally agreed that generic skills that industry judged to be important included the ability to read, spell and write well, to solve problems, to collect and analyse information, to use information technology, to speak and communicate well with people and to work in teams. These groups also agreed that being motivated, self-confident and adaptable to change were considered by industry to be important.

The teaching of generic skills

The teachers and students who were surveyed generally agreed that the generic skills that were taught well included the ability to solve problems, to collect and analyse information, to speak and communicate well with other people, to work in teams, and to plan and organise. There was also agreement that attributes that were taught well included being self-confident, being motivated and having a practical focus.

There was also agreement among teachers and students generally that the generic skills that were taught poorly were reading, spelling and writing; using mathematical ideas; communicating with persons from other cultures; building and managing a team; resolving conflict; being able to change; dealing with incomplete information; and challenging how things are done.

Facilitation of generic skills through VET subjects and courses

The interviews with teachers revealed the view that four main factors facilitated the learning of generic skills: the learning strategies used with students; access to highly experienced teachers; training packages; and the assessment.

Most of the teachers believed that teachers in existing programs taught generic skills through assessment techniques and by using learning strategies that involved hands-on, or 'learning-by-doing', types of activities. Many teachers believed that the principles of adult learning offered a better set of guidelines for teaching generic skills than did more traditional approaches to teaching. These principles provide for more interactive, flexible learning arrangements in which learners are active rather than passive participants who are encouraged to develop their ideas about how to use their skills and knowledge on the job.

In the focus groups students talked about the importance of having teachers with real life experience, who inspired them to get a job in their chosen profession. They believed that good teachers helped them develop their technical as well as broader generic skills and showed them how generic skills supported the development of technical skills.

Many of the teachers thought that the training packages used in vocational education and training had the teaching of generic skills successfully embedded into the content, but others thought that the generic skills needed to be made more explicit. All interviewees believed that there was considerable variety across training packages and across industries, but the consensus was that more recent training packages were 'doing a better job' in successfully including generic skills—either in the content, or in the assessment activities or the processes described in the package. Teachers were quite critical of the performance of training packages in embedding generic skills, and in helping students to be employable in a range of jobs in different industries.

Some of the teachers thought that more experienced teachers had more positive attitudes about training packages: that experienced teachers with solid backgrounds in industry 'knew where the training packages were coming from'. As many of the skills (for example, team-building skills) were implicitly presented in packages, the person delivering the package was seen as responsible for deciding 'how to bring those skills forward'. Students supported a portfolio model of assessment of generic skills, and a student-support approach to the teaching and learning of generic skills. As some teachers observed, students preferred a portfolio model of assessment for generic or hard-to-quantify skills.

Strategies for the advancement of generic skills

There was strong agreement that generic skills need to be more widely promoted within the VET sector. There is a need for greater promotion of the value and importance of generic skills to teachers and students. There is currently some confusion about the wide range of terms being used, and students do not recognise the term generic skills as well as do teachers. On the other hand, teachers and students tend to agree about which generic skills are taught well, which are taught poorly and which are important to industry. This information should be used as input into frameworks being developed to identify the generic skills that need to be built more strongly into VET programs and training packages.

According to teachers who were interviewed and surveyed, an improved focus could be achieved by strategies including:

- separate modules for teaching generic skills
- better promotion by teachers of the importance of generic skills
- development of teachers who have higher levels of knowledge and experience in teaching generic skills
- more explicit profiling of generic skills within training packages
- improvements in how generic skills are explained and assessed.

Both trainee and current teachers need improved training in the use of a wider range of models of teaching and learning, including student-focussed and flexible learning modes in which the teacher is an enabler or coach rather than the expert. Teachers in this project reported that, in order to successfully introduce the concept of generic skills, teachers need to be more flexible and skilled in using learning strategies that help them identify students' needs in relation to developing generic skills. Teachers also need to have more regular contact with industry to determine the generic skills that are required, and the learning and assessment processes on and off the job that can be used to develop those skills in students.

Finally, a more planned and strategic approach is needed towards embedding the development of generic skills in training packages. Guidelines need to be produced for training package developers that state which skills are important and how generic skills can be built into the training package. Guidelines are also needed about the assessment and reporting of generic skills achievement by students. In addition, there needs to be a planned approach to targeting and updating existing training packages in order to improve the identification of important generic skills and their development in the training packages.

1 Introduction

Internationalisation, globalisation and the demand for generic skills

It is clear that Australia has prospered due to the willingness of its people to work hard, to be innovative and to learn new skills. The general knowledge and skill needs of Australian business are being shaped and driven by internationalisation, globalisation and our position in a new knowledge economy that is rapidly changing and intensively competitive. However, as noted by the Innovation Summit Implementation Group (2000) and by leading figures in vocational education and training (VET) such as Moira Scollay (1999), Australia has some way to go towards becoming an ideas culture.

A major challenge is to continue to prosper in a global economy in which individuals are expected to have well-developed technical skills, as well as generic skills that allow high levels of flexibility and adaptability and an ability to work across a range of jobs. The interest of the Organisation for Economic Co-operation and Development (OECD), the International Labour Organization (ILO) and the European Union in generic skills highlights the desire of many of our competitor nations to develop people who have a high level of employability in a global and rapidly changing workplace. Individuals need to leave the Australian VET system as people who can not only take up immediate employment, but who also have a high level of employability that enables them to adapt to the demands of various jobs throughout a lifetime. Central to this employability is a solid foundation in generic skills. The increased significance of generic skills has implications for learners, teachers and VET providers Australia-wide.

Australia's need to operate in the new knowledge economy, however, is revealing weaknesses in the skills and knowledge of our workforce. Two international benchmarking exercises (the Worldwide Study on Innovation Management [Droege 1999] and the Report of the Industry Task Force on Leadership and Management Skills [the Karpin Report 1995]) reveal disappointing findings. Australia's employees lag behind those of other countries in their interpersonal and cross-cultural communication skills and team skills. Both of these benchmarking reports have concluded that our schools, the VET sector and universities must play a significant role in developing the generic skills and knowledge bases that will create a workforce that can respond to globalisation and internationalisation. Our transition to an enterprise nation and an ideas culture will need graduates who have emerged from the VET system with knowledge and skill sets built around high-order technical as well as generic skills.

In the current context, the VET sector needs to continue to review its performance in providing employees with the generic employability skills required by industry. Since the Mayer Committee work in 1992 (Mayer 1992), the corporate sector has increased its demands upon vocational education and training to provide learners with strong generic skills. In particular, organisations are responding to the continued pressures to deal with change. Workforces need to have broader and transferable skills that allow employees to continue to work effectively and efficiently in highly competitive and changing environments and markets. Employers are looking to the VET sector to help them instil these skills into their workforces.

In these new environments, more people in our society will adopt a portfolio approach to their lives and work. As Charles Handy (1995a; 1995b) notes in his various discussions of the rethinking of jobs and work, the very definition of work is changing. Work once meant having a job with an employer. It is predicted that in the future half of the workforce of nations like Australia will be working outside an organisation. Traditional organisations now employ only about 50–60% of our workforce. We are witnessing an increasing growth in numbers of temporary, part-time and contract employees, and a massive increase in numbers of independent workers, consultants, entrepreneurs and individuals setting up small service firms. As Handy notes in *The empty raincoat* (1995a) and *The age of unreason* (1995b), workers need to learn to live with uncertainty and constant change. Employees' sense of personal security will very much rest in their ability to update and up-skill themselves continually. Importantly, generic skills are perceived to be key factors in establishing this new form of personal security, and in supporting skills development generally.

Fundamental to this shift from training to employability will be the need for workers to become learners who have the attributes, motivation and competencies to move comfortably into lifelong learning. There is already evidence that such employability skills are required. Various employer surveys (for example, NCVER 2001) show that employers continue to emphasise the need for greater levels of training in job-specific skills. In the NCVER survey, some two in five employers perceived generic skills to be a higher priority than more job-specific skills.

In summary, traditionally organisations assumed that their people were limited, simple and lazy. As a result, organisations used a command and control model and well-defined structures to define jobs, systems and processes to make sure the work was done. Today nations and their post-industrial information organisations will survive and grow only if they arm their workforces with broader skills, autonomy and responsibility. In these learning organisations (see Senge 1990), having flexible, adaptive and responsive employees will create specific learning capabilities not present in traditional organisations. The most successful industries will have employees with strong technical and generic skills, and an acceptance of lifelong learning. With this skill set, they will move easily across different contexts, national boundaries and economic conditions. Most importantly, their high levels of employability will benefit not only these individual workers, but also their organisations and the economies of their nations.

The purpose of this study and its research questions

There are numerous interpretations of the generic skills required of employees. In Australia, the debate about the nature of generic skills is linked to discussions about employability, internationalisation, workplace change and national competitiveness. Surveys reveal a gap between how generic skills are facilitated, in VET institutions in particular, and the skills employers want to see in their workforces. As a result, industry and other players want the VET system to be better focussed on how to develop these generic skills. But at this stage, we have much to learn about how VET teachers and students perceive generic skills and their utility, and the success of institutions in facilitating the development of generic skills in their current students.

The major purpose of this project was to use in-depth interviews and national surveys to determine the attitudes that teachers and students in vocational education and training have about generic skills. In assessing the attitudes of both groups, the project explored the levels of similarity and difference in attitudes as well as levels of knowledge. There is evidence that there are differences in the perceptions of employers and staff in VET institutions about which generic skills need to be developed, and how. One implication from previous research is that the gap between the generic skills possessed by students and what employers require is due to students as well as their teachers not valuing the development of these skills as much as do employers and their industries. However, few studies have directly compared the views of teachers and students

about generic skills. The current project explored the likelihood that VET teachers and students perceive generic skills differently, and whether their attitudes might be more similar in certain areas of generic skills development than in others.

The second purpose of this project was to examine how VET institutions in Australia are facilitating the development of generic skills; that is, how VET institutions are fostering the development in students of the range of cognitive, personal and interpersonal skills that are perceived to be relevant to employability. Again, to address this research question, this project compared the attitudes of teachers and students gained from interviews and surveys.

In summary, this research project examined two central research questions:

Q.1 To what extent are generic skills valued by students and VET teachers, and why?

Q.2 How are generic skills being facilitated through VET subjects and courses, and in traineeships and apprenticeships? Within this question is the related issue of possible differences between the approaches used to develop such generic skills in different VET courses and training packages.

Report structure

Chapter 2 reviews relevant literature relating to the extent and nature of generic and employability skills, and considers the less well researched area of how such skills are developed within the VET system. Chapter 3 describes the methods used for the study, and outlines the basic characteristics of the teacher and students respondents. Chapter 4 describes and discusses the findings of the teacher and student interviews, and the national surveys of teachers and students, assessing how the findings address the two research questions. Chapter 5 outlines strategies, informed by the research findings and the literature, that can be considered for facilitating the further development of generic skills in vocational education and training.

Appendices A and B respectively contain copies of the interview and survey instruments used in the research. Appendix C contains tables of summary data from the teacher and student surveys, which are discussed in chapter 4.

2 Defining generic skills

What are generic skills? In 1992 the Mayer Committee (Mayer 1992) identified seven key competency strands: (1) collecting, analysing and organising ideas and information; (2) expressing ideas and information; (3) planning and organising activities; (4) working with others and in teams; (5) using mathematical ideas and techniques; (6) solving problems; and (7) using technology. The findings of the Mayer Committee in Australia, and also of the Australian Industry Group (Allen Consulting Group 1999), closely resemble those of the UK National Skills Task Force (1998), which identified the generic skills of communication, application of numbers, problem-solving, team-working, information technology and improving one's learning and performance.

Together, the findings of the Australian Industry Group interviews (Allen Consulting Group 1999), the Mayer Committee (Mayer 1992), the UK National Skills Task Force (1998) and the more recent Innovation Summit (Innovation Summit Implementation Group 2000) suggest that, for Australia, a more detailed generic skills set might include at least:

Generic core/basic 'hard' skills:

- literacy
- numeracy
- problem-solving skills
- information technology skills
- systems thinking

Interpersonal/relationship 'soft' skills:

- interpersonal, inter-group and cross-cultural communication skills
- team building and teamwork skills
- time management
- customer focus
- lateral thinking and creativity
- reflective skills

In addition, there is considerable research into the attributes that employees need in order to deal with our changing work environments (Callan & Terry 1997; Gallois & Callan 1997; Hager, Garrick & Risgalla 2001; Terry & Callan 1998; Terry, Carey & Callan 2001). These attributes include a tolerance for ambiguity, robustness, strong communication skills, self-confidence and a tolerance for change. Furthermore, the work into learning organisations by Peter Senge and his colleagues (for example, Senge 1990; Senge et al. 1999) emphasises the need for employees to have skills in team building and systems thinking, and high-level communication and dialogue skills.

These attributes provide a third dimension for a possible definition of generic skills: personal attributes. Employees need to possess the following personal attributes:

- self-confidence
- capacity to change
- tolerance of uncertainty and ambiguity
- continuous learning
- willingness to challenge assumptions
- ability to learn from on-the-job experiences
- self-management

As this brief review suggests, the generic skills required in the Australian and other workforces include sets of generic core/basic 'hard' skills, interpersonal/relationship 'soft' skills and personal attributes. This broad framework of generic skills is similar to the generic skills identified by the US Secretary's Commission on Achieving Necessary Skills (see for example, US Secretary of Labor 1999), and to lists from reports on core and generic skills from New Zealand and the United Kingdom (see Green 1999; Marsh 1997).

Recently in Australia Kearns (2001) has provided further discussion of the nature of generic skills and their definition. As his report guided parts of the current project, the Kearns study is now discussed in more detail.

The Kearns report on generic skills for the new economy

Kearns (2001) defined generic skills as:

> the skills which can be used across a large number of different occupations. They include the key competencies (or key skills) but extend beyond these to include a range of other cognitive, personal and interpersonal skills which are relevant to employability.

Kearns, like other Australian and international investigators in the field, believes that a new set of business conditions are driving the need for nations to develop a more comprehensive and holistic approach to how they foster learning and innovation. These new conditions include increased levels of change, globalisation and internationalisation and, among employees, a strong desire for personal development, lifelong learning and employability.

Towards defining the essential generic skills, or key competencies, Kearns reviewed evidence from studies in psychology, philosophy and education. He concluded that there is no universally accepted framework for the definition of essential generic skills. Fundamental to this situation is a lack of understanding about the developmental pathways followed by individuals as they develop their attributes, values and core skills. Theoretical frameworks differ, and there is debate and disagreement about the forms of training and education and the types of learning environments that are required to foster the new sets of values, attributes and generic skills that will be required by future industries and economies.

Kearns put his preliminary views into various tentative frameworks that place generic skills into a developmental structure. In two of the models he presents, there are four key clusters of attributes:

- work readiness and work habits
- interpersonal skills

- ✧ enterprise, innovation and creativity skills
- ✧ learning, thinking and adaptability skills

Callan (2001), in a report into the management and leadership skills required in the VET sector , argued that VET managers need to establish a strong sense of personal mastery and self-direction. Learners today, whether as leaders/managers or knowledge workers, need to establish personal mastery as a driver for their learning and innovative thinking. Senge (1990) argues:

> that personal mastery goes beyond competence and skills, though it is grounded in competence and skills … it means approaching one's life as a creative work, living life from a creative as opposed to a reactive viewpoint.

In line with such thinking, in the second model presented in his report, Kearns added to his four clusters an integrating cluster of autonomy, personal mastery and self-direction. Unfortunately, he did not fully explain or elaborate upon this development to the model. However, the incorporation of an integrating cluster focussed upon personal mastery and self-direction does provide the 'driver' Senge describes. People with a high level of personal mastery live in a continuous mode of learning. Personal mastery is the discipline that encourages people to continually learn how to see their current reality more clearly, whether the reality is about work or their personal lives.

Building generic skills requires learners who continually seek and take responsibility for their own learning. Kearns' second model of clusters of key generic skills, with its driver core of autonomy, personal mastery and self-direction, was used to guide much of the current project's focus upon what VET students and teachers see as generic skills. His cluster framework informed the interview study and the teacher and student questionnaire surveys that were used in this project.

Employability skills for Australian industry

A recent report to the Business Council of Australia (BCA) and the Australian Chamber of Commerce and Industry (ACCI), *Employability skills for Australian industry* (Curtis & McKenzie 2001), has provided another detailed literature review of research into the nature of generic and employability skills in Australia and elsewhere. The report expands our understanding of what makes a good employee, and emphasises the importance of workplace skills such as communication, teamwork, problem-solving, initiative, planning and organisation. In the report, managers revealed that personal attributes that reflected many generic skills were as important as other employability skills.

The report also offers a framework for a proposed set of generic employability skills. The set of generic employability skills is proposed to offer a list of skills that can be more openly debated with employees, employers and industry. The framework consists of three categories: basic skills, intellectual skills and personal attributes. The specific skills overlap considerably with those described in earlier generic frameworks proposed by Australian and international researchers.

Most importantly for moving the debate forward, in line with developments in other countries the Business Council of Australia and Australian Chamber of Commerce and Industry report proposes that there is a case for Australia to reconsider the scope of the key competencies endorsed by the Mayer Committee.

Facilitating the development of generic skills

While a number of reports have outlined the features of generic skills, we have much less understanding of how these skills are being advanced in the VET system. Central to the focus of

the current project on VET teacher and student attitudes is evidence that Australian companies want more from our vocational education and training system. In the Australian Industry Group surveys (Allen Consulting Group 1999), only 10% of employers agreed that schools prepared employees well for work. They perceived a significant proportion of young people emerging from school with inadequate numeracy and literacy skills, poor job attitudes and an insufficient grounding in generic interpersonal skills.

There is similar concern among TAFE and university teaching staff about the transferability of general skills between TAFEs and universities, and between these institutions and the workplace (see Golding, Marginson & Pascoe 1996). The complexity of generic skills poses a major challenge to their successful integration and development in the teaching and learning models of our schools and VET institutions.

Australian companies clearly want closer links between the education and training system and the workplace. Again the Australian Industry Group surveys (Allen Consulting Group 1999) show that companies want young people to be better prepared in terms of key generic core skills, personal attributes and interpersonal skills. Australian companies expect the vocational education and training system to provide the generic core foundations for a national skill pool. In addition, the vast majority of Australian companies prefer that training occur in the workplace, much of this training building on the foundations already established at school or institution (Allen Consulting Group 1999; Callan 2001). Employers are critical, however, of the accessibility and complexity of the VET system, and the broader employability of graduating trainees and apprentices.

3 Methods

Interviews and focus groups

During September and October 2001, a sample of 25 senior managers and teachers were interviewed from Queensland, New South Wales, Victoria and South Australia. Eighteen of the 25 respondents were teachers actively involved in teaching in six different institutions. Respondents were located through a form of network, or snowball, sampling. This technique is frequently used in exploratory studies where it is more important to sample a range of different types of respondents than to gain a representative and random sample. Therefore the interview sample was a purposive one.

Teachers were interview face to face and by telephone in Brisbane and by telephone for other locations. Interviews averaged 20–40 minutes in length. The interview schedule (appendix A) comprised mainly semi-structured and open-ended questions that focussed upon:

- respondents' background as teachers
- their knowledge and experience in the past and present with the development of generic skills in VET
- their views about how well generic skills were developed and assessed in the training packages most relevant to their industry
- the generic skills most important to teachers, students and industry
- their attitudes about how generic skills could be better facilitated.

These questions were followed up with various probes and additional questions in order to gain more detail on issues that were raised by each respondent. Furthermore, as the interviews progressed, there was an attempt to gain convergence of attitudes on certain topics, and so more time was spent in later interviews on issues where attitudes most differed.

The interviews with teachers provided a rich source of qualitative comment about the attitudes to and nature of generic skills. In addition, the findings from the teacher interviews were used to guide the development of the survey questionnaires for teachers and students.

Three focus group meetings with 25 students in total were held with VET students in Queensland. These group meetings ranged from 30 to 50 minutes, and were held in student classes or in lounges in the student areas on the various campuses. In the student focus groups, questions (appendix A) explored respondents' understanding and opinions of:

- the purpose of studies at TAFE
- the types of skills they believed employers wanted
- the types of skills they wanted as students

- how generic skills are facilitated (or might be facilitated better) in TAFE and other institutions
- possible strategies for promoting generic skills in their institutions.

In the focus group interviews, students preferred the term employability skills rather than generic skills in talking about their courses and career plans.

National surveys

Two highly structured questionnaires were developed and piloted in late 2001 on a small sample of VET teachers and students in Queensland. Other researchers also critiqued earlier drafts of both questionnaires. To allow comparisons of attitudes, many similar questions were developed for the teacher and student questionnaires.

The final versions of the VET teacher and student questionnaires used in the project are presented in appendix B. The questionnaires for both teachers and students consisted of:

- structured questions on:
  - background
  - awareness of the term generic skills and related concepts
  - ratings of the perceived importance of gaining various generic skills through training
  - ratings of the generic skills that are most important to the type of job or career being sought by students, skills the industry program is teaching well and poorly, and the skills most important to industry
  - perceptions of attitudes about generic skills
- open-ended questions that examined how generic skills can be better facilitated through VET courses and training packages.

Ten TAFE institutions were contacted in early 2002 in Queensland, New South Wales, Victoria, South Australia, Western Australia and the Northern Territory. These institutions were chosen at random to present TAFEs that varied in size and location. In total, nine TAFE institutions participated in the surveys, with two from each of the larger States of Queensland, New South Wales and Victoria.

The researcher mailed the teacher questionnaires to each institution for distribution, completion and return by teachers. Institutions were asked to send the teacher surveys to a broad sample of the teachers who were involved in a range of industry programs. The teacher questionnaires were completed during March–June 2002. In total, 105 teachers replied to the survey, which was the targeted sample size for the project.

Using a form of quota sampling, a bundle of 100–200 student questionnaires was mailed to each of the same institutions for distribution and completion in class. In line with quota sampling, teachers were asked to distribute the student questionnaires to students who were most representative of the major courses and programs being conducted in their institution. The student questionnaires were completed during March–May 2002. In total, replies were received from 755 students, which was in line with the project target of 800 replies. No names or identifying information was requested on the completed questionnaires.

In all cases, only the research team saw completed teacher and student questionnaires, which were destroyed after data entry and analysis. All institutions participating in 2002 were provided with a summary of the findings of the national teacher survey, and the findings for their own students compared against the national sample of students.

While it does not yield a random or representative sample, the quota sampling strategy for teacher and student surveys is well accepted in the survey literature for ensuring that various subgroups in a population are represented. This technique allowed a full test of opinions about

generic skills, and tests of differences in attitudes between different types of VET teachers and students. Where samples were large enough, the opinions of different types of students were examined (for example, Certificate 1 and 2 students compared to all students).

All survey data that involved ratings scales were analysed using the Statistical Package for the Social Sciences (SPSS). Analyses included frequency tabulations, percentages and mean ratings. Open-ended qualitative responses to various questions in the survey were subjected to content coding. This coding resulted in the identification of broad issues, as well as the reporting of specific qualitative comments by teachers and students where relevant.

Characteristics of teacher and student respondents

Appendix C provides a summary of the characteristics of the 105 teachers (tables 1–6) and the 755 students (tables 7–13) who responded to the national survey.

As can be seen in table 1, 58 male and 47 female teachers responded to the survey. New South Wales (41%), Queensland (19%) and Victoria (19%) had the largest numbers of respondents (table 2). Only TAFE institutions were surveyed (table 3). Some 74% of teachers were employed full time (table 4), and 72% indicated that their primary mode of teaching was face-to-face classroom teaching (table 5). Teachers taught at all levels, with the largest groups being involved in Certificate 3 and diploma courses (table 6).

For the student sample, 57% were males and 43% were females (table 7). Student respondents were mainly from New South Wales (38%), Queensland (28%), Victoria (18%) and Western Australia (12%) (table 8), and almost all were TAFE students (table 9). Students represented all stages of study, but the majority were less than half way through their program (table 10). All levels of qualification were represented, with the major groups of students undertaking diploma (37%) and Certificate 3 (21%) courses (table 11). The majority of students (86%) were not involved in a traineeship or apprenticeship, leaving 15% who were (table 12). Finally, students represented thirty industry groups (table 13).

Chapter 4 presents the findings that emerged from the interviews with teachers, the focus group meetings with students, and the attitudes and perceptions expressed by teachers and students in the national surveys.

4 Findings

This chapter addresses the two central research questions examined in this research project:

Q.1 To what extent are generic skills valued by students and VET teachers, and why?

Q.2 How are generic skills being facilitated through VET subjects and courses, and in traineeships and apprenticeships?

The chapter concludes with a discussion of respondents' views on strategies for improving the facilitation of generic skills in VET courses and training packages.

All tables that summarise the findings from the teacher and student surveys are presented in appendix C. Where survey questions were similar for teachers and students, the tables are presented together (for example, table 14a for teachers and table 14b for students).

To what extent are generic skills valued by students and VET teachers, and why?

Teachers' and students' understanding of generic skills

In their interviews, teachers used several phrases to define generic skills, including soft skills, people skills, transferable skills, work skills, core skills, Mayer competencies and core competencies. Despite the variety of terms used to describe generic skills, most teachers appreciated this variety as part of a long history of debate in the fields of education and training. Many felt a sense of history re-inventing itself; that is, they perceived the debate about generic skills as a return to issues debated in the past. Others felt the debate would be somewhat circular until there was clearer definition and more useful theory about how people develop cognitive and analytical skills during their lives.

Teachers had no agreed-upon definition of generic skills. As the Kearns (2001) review indicates, several disciplines, such as psychology and education, have contributed to conceptual frameworks for the development of skills, personality characteristics and abilities. However, there is no universally accepted theory of human or skills development, or even common definitions and terms across academic disciplines. As Down (2000) noted also, the knowledge and understanding of key competencies are highly variable among VET providers.

Table 14a shows the percentage of teachers surveyed who indicated that they knew and fully understood each of 9 terms representing generic skills:

- 80% of teachers reported that they knew and fully understood the concept of generic skills
- they reported high levels of knowledge of the terms core skills, transferable skills, work skills, employability skills and life skills

- they were much less likely to report full knowledge and understanding of the terms Mayer competencies, soft skills and hard skills.

In the focus group interviews, the generic skills reported by students matched the clusters reported in the Kearns (2001) framework. 'Top-of-the-mind' generic skills that were mentioned included good communication skills, team skills and an ability to work with others. Also mentioned were the need to be self-confident and good self-managers and being able to fit in quickly. Only with some probing did students expand upon the need for skills in enterprise, innovation, creativity, learning and thinking.

Following up this issue in the student survey, students responded to a similar but shorter list of terms than did teachers (table 14b). Among student respondents, 59% had heard of the term generic skills, while 80% of teachers knew and understood the term well. The majority of students reported that they had heard of the terms employability skills (75%), key competencies (73%) and core skills (68%).

Teacher and student attitudes about generic skills

As employers are key players in the VET system, teachers believed that their opinions should be responded to. In our discussions with them, some teachers argued that, in reality, Australian employers are merely responding to larger factors that are at work. The economy and international competition are the main forces determining the current promotion of generic skills development. However, a number of teachers felt that the discussion of generic skills was a return to issues that dominated their teaching lives some 10–15 years ago.

Other teachers believed that the focus upon more generic skills did not support the value of older teaching models at all. Rather, in the past, the teaching of core skills had not been linked to the workplace as it is today. In those times, teaching strategies did not draw upon workplace learning or experiences. For instance, as one director of studies put it, a student learned communication skills, but not the application of those skills to the demands of communicating with your boss, co-workers or customers with different needs.

Several teachers in the interviews believed that the re-emergence of an emphasis on generic skills reflected the growing set of interrelationships between employers, students, teachers and local and world economies. Employer needs are now only one part of this complex matrix of factors at work in shaping the nature and delivery of training, with other factors including community and national needs.

In order to expand upon the findings from the interviews, teachers and students were asked in the survey questionnaire to rate a number of statements that tapped further into their opinions about the importance of generic skills, their assessment and how they were presented in training packages (see table 15a). The vast majority of teachers reported that:

- they explained to students the importance of learning generic skills, and that students understood the assessment of these skills
- students were more focussed upon learning the skills that they believed were relevant to the job or industry they wanted to work in than on learning generic skills.

Teachers were also quite critical of the performance of training packages in embedding generic skills, and in helping students to be employable in a range of jobs in different industries, with far fewer teachers agreeing with statements about these matters.

Students were also asked in the questionnaire to rate a number of attitude statements about the importance of generic skills and their assessment, to expand further upon a number of issues raised in the focus group interviews (table 15b). The vast majority of students:

- were very positive about the skills of their teachers in explaining why certain skills need to be learned, and in helping students to develop new skills
- did want to learn skills that allowed them to change jobs.

However, 59% of student respondents to the survey also said they wanted to learn only skills that were relevant to the industry they wanted to work in. This finding generally supports the opinions among teachers that students are often narrowly focussed upon the more technical skills.

Teachers' views on student attitudes to skills development

In the interviews, teachers believed student attitudes to skills development would vary depending upon whether they were TAFE students, or involved in traineeships and apprenticeships. Trainees and apprentices were focussed upon the need to gain immediate on-the-job skills. Apprenticeship and traineeship students were judged to have much higher overall skill levels than students who were straight from Year 12. As one director of studies reported:

> They have much better developed skills in hands-on diagnostic work, practical problem-solving skills and related skills.

Industry, as well as the individual learner, had little patience for topics not linked to an immediate 'real-world' application. It was generally agreed among teachers that generic skills needed to be built more explicitly into Certificate 1 and 2 courses for most industries. Current courses at this level were highly technically focussed.

On the other hand, Year 12 graduates who had little or no industry experience were judged by several teachers in the interviews to have quite basic skills in many of the generic 'soft skills', especially an understanding of customer focus and of the importance of good workplace relations and teamwork. TAFE students in hospitality, business and similar programs were seen to be:

> [not as] on-the-job focussed, and are more likely to be the groups who will broaden their career horizons later in life.

Also, teachers who were interviewed believed that students' attitudes about the more important generic skills varied depending upon the nature of their current training. As one teacher commented, 'Different industries attract and in turn create different students'. Full-time students straight out of Year 12 clearly showed a broader appreciation of the need for more technical as well as well-developed generic competencies. They believed that their future employers wanted employees with good technical skills, as well as broad general or people skills. As one student said:

> We have a lot to learn, never having been in a job like the one I want to do.

The importance of generic skills to industry

In the interviews, teachers expressed the view that employers want graduating students who have core skills that are transferable from one job or position to another. In terms of this 'wish list', as teachers described it, employers want employees who have good interpersonal and team skills and who can add value from their first day at work. Employers expect employees to be adaptable and quick to learn, and they are looking for employees who will become a part of the organisation's future. Therefore, employers desire employees who will be innovative, able to deal

with change and willing to learn new skills and knowledge as the business and the business environment around them grows and changes.

There was a lot of discussion among teachers about the breadth of their 'brief' from employers, especially in developing positive attitudes about work. As one respondent reported:

> Employers tell me. 'You give them the attitude, and we'll teach them the content'.

At the same time, while teachers believed they could 'train skills development', they also believed that 'training in attitude development' was complex and an unrealistic expectation by employers.

Most teachers interviewed believed that employers were most dissatisfied with the interpersonal, team and general communication skills of recent graduates from the VET system, as well as with their levels of motivation and general job attitudes. Employers need staff to have a solid set of oral and written communication skills, and a basic understanding of communication/information technologies.

In the survey, teachers and students were asked to nominate from a list of 26 generic skills five skills that were most important for their industry. According to teachers, the generic skills that are important to their industry include (see table 16a):

- being able to solve problems
- being able to speak and communicate well with other people
- being able work with other people in teams
- being adaptable to change at work
- being able to read, speak and write well.

According to students, the generic skills that are important for a job in their industry include (see table 16b):

- being able to speak and communicate well with other people
- being able work with other people in teams
- being able to solve problems
- being self-confident
- being motivated.

The importance of generic skills to students and teachers

Students and teachers surveyed were asked to rate the importance of students gaining each of a set of 26 skills. Teachers rated their view of the importance for students to achieve the skills by the end of their training; students rated the importance of the skills for the type of job they wanted to gain. The overwhelming majority of teachers and students believed that all of the skills listed were at least slightly important or important.

In order to differentiate between the skills, tables 17a and 17b reveal the extent to which teachers and students respectively rated each skill at the top of the scale; that is, as 'very important'. The students' table also differentiates between Certificate 1 and 2 students and all students.

Results reveal that teachers and students had broadly similar perceptions about the importance of the skills. Overall, both groups rated highly (50% or more of respondents) the need for the skills:

- being able to read, spell and write well
- being able to solve problems

- being able to collect, analyse and organise information
- being able to speak and communicate well with other people
- being able to work with other people in teams
- having a practical focus
- being ethical
- being motivated
- being adaptable to change at work.

The majority of students added to these skills those related to being a good manager of their time, having work and study skills and being self-confident.

In the interviews, some teachers believed that Certificate 1 and 2 students would have a greater focus upon more technical than generic skills development. This preference might emerge in these students giving overall lower ratings of importance to generic skills than students as a whole. However, there were few differences in the importance ratings of the listed generic skills between Certificate 1 and 2 students and the total group.

Certificate 1 and 2 students (table 17b) did tend to give lower ratings to the importance of being able to read, spell and write well; being able to collect, analyse and organise information; being able to communicate with people from other cultures; being a good time manager; and being able to plan and organise. On the other hand, a higher percentage of Certificate 1 and 2 students emphasised the importance of using mathematical ideas and techniques; and being able to understand ideas and systems.

The teaching of generic skills

In the survey, teachers and students were asked to nominate from the list of 26 generic skills five skills that were being taught well and five that were being taught poorly.

According to teachers, the generic skills being taught well include (see table 16a):

- having a practical focus
- being able to speak and communicate well with other people
- being able to work in teams
- being able to solve problems
- being able to plan and organise activities.

For students, the generic skills being taught well include (see table 16b):

- being able to work in teams
- being able to speak and communicate well with other people
- being able to collect, analyse and organise information
- being motivated
- being self-confident.

For teachers, the generic skills being taught poorly are (see table 16a):

- being able to read, spell and write well
- being able to complete a task when there is incomplete information
- being able to change how one thinks and behaves

- being able to challenge how things are done
- being able to understand and communicate with people from other cultures.

According to students, generic skills that are being taught poorly include (see table 16b):

- knowing how they learn best about new skills and ideas
- being able to challenge how things are done
- being adaptable to change at work
- being motivated
- being able to complete a task when there is incomplete information.

How are generic skills being facilitated through VET subjects and courses?

The vast majority of teachers interviewed believed that generic skills were being facilitated through:

- learning strategies used with students
- access to highly experienced teachers
- training packages
- the assessment.

Learning strategies

In almost all of the interviews we discussed whether the successful facilitation of generic skills requires the application of more adult focussed principles. Old-style approaches were labelled as 'chalk and talk' sessions. In this model students are assessed to have gaps in knowledge and skills, and the teacher operates more within an expert than a facilitator model.

One departmental head believed that too much was expected of teachers today by some industries. He went on to say:

> We just don't know how to teach them this wish list of employer skills. Employers expect too much from teachers and students, given the conditions we are working under. We are willing to continue to change, but we will need professional support and development if we are to fully adopt more student focussed or adult models of learning.

Similarly, an institution director believed that vocational education and training was moving more towards a wider acceptance of an adult learning model and student-focussed teaching. However, she concluded that 'many teachers just don't know how to get there'. Some teachers reported being tired and angry about the continued demands from industry. With reference to generic skills, the needs of industry had driven a narrow outcomes-focussed approach to skills development. They felt that in earlier times there had been a staging of the learning process that was informed by a curriculum, and 'a connection between subjects'. In this system, a stage-by-stage, or cumulative, learning model meant that skills were revisited possibly several times in a program.

Several teachers considered that the principles of adult learning offered a better set of guidelines for teaching more generic skills, and these principles were critical if teachers were to be

successful in facilitating the development of generic skills in learners. According to adult learning principles:

- Participants learn from each other.
- Participants are treated as adult learners with valid opinions, values and experience, not as passive recipients of information.
- Adult learning and action learning principles are often applied, highlighting a focus upon the adult as the learner and lifelong learning.
- Training is interactive and often group based—everyone in the class has a valid experience.
- Learning methodologies are flexible.
- Participants are strongly encouraged to work from and to develop further their personal ideas about how to use these new skills and knowledge on the job.
- Participants are part of a learning environment that encourages sharing, trust and reflection.
- The design and delivery of the learning process recognises the issues and responsibilities students face in the workplace.

There was general agreement among teachers interviewed that the quality of interactions with students was fundamental to the success of this learning process. Whether within a 'teacher as expert' or a 'teacher coach' model, the teacher had the authority to model and shape the learning environment.

As one teacher explained:

> Whatever the teaching model, to develop good communication, problem-solving or related generic skills, it is up to you. First, gain the permission of students. A good teacher can next make up for the shortcomings of a training package, the quality of the classroom environment or a poor workplace experience that students might have with an employer. Where the generic skills are implicitly rather than explicitly stated in the training package, a skilled teacher can cluster the competencies, and design the assessment and classroom activities to make it all work. Unfortunately, there are some teachers with only basic training who just don't know how to do this.

Several teachers argued that students knew little about learning theories or why they were doing things the way they were in class or in training. They did not have an in-depth understanding of how one learns how to learn. They had a broad understanding of their preferred learning styles, but only at a basic level of knowing what strategies helped them learn or not learn. In addition, in the focus groups students wanted their teachers to be more explicit in telling them which skills were essential or useful. They felt that the process was currently too subtle. Some students felt that they were left to guess or infer the importance of many skills for the type of employment or career they wanted to follow.

Access to highly experienced teachers

A number of teachers interviewed believed that more effort needed to be put into teacher training to encourage the adoption of more student focussed, facilitative forms of classroom learning in VET. Across institutions, those interviewed emphasised the high level of technical skills and technical competence of existing teachers. However, some senior managers and teachers felt that the broader development of teachers in the area of teaching and learning strategies had been ignored. It was argued that in institutions facing tough times the professional development of many teachers had been ignored in recent periods of cost cutting.

An institution director expressed a different view. He believed that some teachers have become so focussed upon efficiency, effectiveness and control of costs that it was now a challenge for

senior staff to interest teachers in debates about teaching and learning philosophies. He felt that some teachers, 'lost in the activity of teaching', did not know a great deal about recent debates post-Mayer. It was a topic of conversation among faculty and departmental heads, but he believed that front-line teachers were not brought into the debate due to time and related constraints.

One excellent example of this debate is the recent report into what makes for a great teacher in vocational education and training (Corben & Thomson 2001). In this project out of TAFE NSW, it is proposed that VET teaching extend beyond competence in a set of practical skills. It is argued that the best teachers have:

- ✧ a strong learner focus in which students are treated as individuals
- ✧ technical knowledge and currency that give them confidence in the teaching role
- ✧ expertise and flexibility in teaching and learning methodologies
- ✧ personal attributes, beliefs and values that make them aspire to touching people's lives.

In the interviews, there was some criticism of the skill level of workplace assessors and Certificate-trained teachers. They were labelled as 'unsophisticated', 'unable to understand the learning process and the learning journey' and 'unable to comprehend the importance of the educational process'. Some teachers argued that fundamental to success in developing more generic skills among students was the need to have highly skilled teachers who understood student learning styles, competency mapping, learning theory and the wide range of assessment strategies. Learning models were seen to be the basis for helping students to learn about how to learn. Some felt that teachers with more in-depth professional training in education and pedagogy would have more success in marrying together the technical and the more generic skills required by students and their employers. However, others strongly disagreed with these opinions. In contrast to more qualified teachers, many Certificate-4-qualified teachers were judged to be highly motivated, more so than many degree-qualified teachers. In particular, they were perceived to be more motivated by needs to serve their industry and by the more intrinsic rewards of teaching.

In the teacher interviews, several teachers believed that student attitudes about the importance of specific skills are strongly shaped by teacher attitudes to those same skills. If a teacher promoted a skill as being important, there was a strong likelihood that students would think similarly. A number of teachers, however, believed that students were quite traditional in their view of learning. As one described her experiences:

> You have got to get the permission of many students, especially those from non-Anglo backgrounds, to move into new modes and non-technical areas of skill development. Teaching students from different cultural backgrounds really adds another level of complexity to skill development.

Students talked about the importance of having teachers with real life experience, who inspired them to get a job in their chosen profession. They believed that good teachers helped them develop their special technical as well as broader life skills. They understood that their teachers had considerable industry experience and regularly visited the workplace to maintain currency.

Students judged good teachers to be passionate, enthusiastic, knowledgeable, approachable and well organised. They enjoyed teachers who set different forms of assessment, away from report or assignment writing, to assessment that took a more portfolio approach. Especially challenging in developing students' self-confidence and better communication skills were tasks that involved group work, studies that required seeking the opinions of people through interviews, and more experience based exercises and assessment.

Students spoke positively about self-paced packages, especially their flexibility, speed and applied focus. They felt many of the exercises in self-paced learning made them reflect upon their

broader development of skills. These packages helped them to develop a more personal relationship with their instructors.

Students described a link between the development of certain generic skills and a greater willingness to engage in self-directed learning. For instance, as they studied modules that developed their communication skills, self-confidence and work ethic, they became more responsible for their own learning. Students understood the concept of lifelong learning and believed that a good grounding in any skill that taught them 'how to learn' would be critical in establishing a positive attitude to lifelong learning.

Training packages

Training packages are a major device for facilitating the development of generic skills in learners. In interviews with VET teachers and administrators, many believed that the training packages they worked with had embedded the generic skills quite successfully into the content. The advantage of successful embedding was that the content flowed well. Others, however, felt the embedding was too subtle. All interviewees believed that there was tremendous variety across packages and across industries. But the consensus was that more recent training packages were 'doing a better job' in successfully embedding generic skills, in the content or the process or through the assessment exercises in the training package.

A senior departmental officer discussed the United Kingdom system of work-based pathways for industry skills, as well as its institutional pathways for the development of more broad based skills. He believed this dual system gave the United Kingdom access to better institutional pathways than existed in Australia for producing graduates with transferable cognitive, social and personal skills. He concluded:

> Industry demands have become paramount. We need to rethink a VET strategy that is now proving to be too focussed on industry competencies, and insufficiently focussed upon building in our graduates those skills that allow them to better express themselves, to write reports and to make presentations.

Another respondent replied:

> Training packages are competency assessment packages. They are not training packages. They describe what an industry says competent people in that industry can do. The focus should be on generic skills outcomes for enhanced employability, and not narrowly based vocational outcomes.

Some felt that a different model was needed in which generic skills were introduced earlier in students' studies, typically as a front piece that covered the general skills required to operate effectively, as employees first and, in turn, as employees in a specific industry. The risk was that such 'add-on' or 'bolt-on' modules on generic skills early in the course would not be taken seriously as they were not integrated into the content of the course.

However, some interviewees believed that such generic skills modules do work when they are actively promoted by teachers. In line with this approach, the generic skills packages would need to be linked up front with industry speakers and industry exercises, and with a level of assessment that encouraged students to take them as seriously as more technical modules. The teachers felt that, if the content of any generic skills module were not assessed, students would not take it seriously. The key generic skills to be targeted in these introductory modules would include literacy and numeracy, basic communication and report writing skills, and study or cognitive skills.

Teachers see training packages as a major change to their teaching role. The most negative opinions teachers expressed were that training packages have eroded teacher authority, autonomy and control. Some respondents judged the change to more student focussed styles of teaching or

coaching as 'a further erosion of their power and authority in the classroom'. To these teachers, moving from a 'master or learning leader' model to a 'learning facilitator' model challenged the power relationship within the classroom.

Some teachers proposed that having specific generic skills modules within training packages meant that students now perceived skills development as a 'one-off' rather than a continuous learning process. For instance, students would debate that they had already completed the skill units on generic skills such as problem-solving or written communication, even though the skills coverage was very basic. The counter view was that the institution in most cases still needs to sign off on whether the student has achieved the level of competency required. However, some teachers explained that others in the institution or elsewhere had signed off on a student's level of competency, when their view was that the student still had not achieved the competency.

Many proposed that teachers and workplace assessors had taken too narrow a view of training packages. A frequently cited example was responding to literacy and numeracy problems that might emerge in certain students. While the training packages no longer included coverage of such skills, there were other options that could be used from within the VET system (for example, access to learning support). A number of NSW respondents spoke about the training package as providing merely 'a statement of skills or outcomes that you weave into an approach to impart those skills'. To them, the real driver behind classroom activities and student interaction was the use of the curriculum, not the training package. Similarly, Queensland respondents described how institutions now met about specific training packages to determine similar interpretations of the goals of a package, and appropriate forms of assessment.

More experienced teachers seemed to have more positive attitudes about training packages. While accepting that many training packages present core skills implicitly rather than explicitly, they believed that experienced teachers with solid backgrounds in industry 'knew where the training packages were coming from'. As many of the skills (for example, team-building skills) were implicitly presented in packages, the person delivering the package was seen as responsible for deciding 'how to bring those skills forward'. Some respondents were also critical, as one said, of:

> the very *ad hoc* mapping to the Mayer competencies. I doubt if teachers really take much notice of this mapping.

Assessment

Students and teachers nominated assessment as another mechanism currently being used to facilitate the development of more generic skills. Students were seen to have a very pragmatic view about skills development: if it is assessed, then it must be important. Most students felt that a generic skill had to be assessed to demonstrate to them that it was important. The 'ideal motivator', as one student in a focus group described it, was for a teacher to say that the generic skill was not only being assessed, but was also a skill that would earn those who possessed it more money than those who did not. In terms of the purpose of assessment, both students and teachers believed that students understood how the assessment was being used to test whether they had achieved competence in a generic skill (see tables 15a and 15b).

In the focus groups meetings, students talked about the need to put skills development and assessment within a work context. They wanted to be 'streetwise', and were motivated to learn skills for a specific job or industry. On the other hand, they did not feel that their teachers spent much time explaining how, as one business student put it, '[certain] life skills will help me if I decide to change jobs and positions'. Students also wanted more time to reflect upon work-based experiences. Some reported that there was little use of reflective processes in which they could report on the experiences of working, for instance, with others as part of a team, or on their experiences and learning in solving a problem.

Students supported a portfolio model of assessment of more generic skills. As some teachers observed, a portfolio model of assessment is sometimes preferred for generic or (as one teacher remarked) 'hard-to-quantify' skills, which can include teamwork, innovation and a willingness to challenge assumptions. The portfolio approach, as teachers explained, allowed the use of a wide range of qualitative and quantitative indicators to show that students were competent in a skill.

Many students who were interviewed perceive the assessment load for some existing key competencies to be already too onerous in some training packages. A related challenge is how the additional assessment of generic skills will be built into packages where the assessment is perceived already to be onerous upon students.

Finally, a teacher with expertise in flexible learning and online delivery believed that online delivery in particular provided an ideal channel for embedding generic skills, and for combining coursework and assessment with generic skills development. The web allowed her to set up learning experiences in information search and problem-solving that facilitated generic skills development in these areas. She also found that the use of web- based learning suited the different learning styles of students.

Improving the facilitation of generic skills

While there was a wide range of opinions about which strategies should be employed to improve the facilitation of generic skills, many teachers expressed the view that an improved focus upon generic skills can be achieved by a range of strategies that include:

- separate modules on generic skills
- better promotion of their importance by teachers
- the identification of specialist teachers who have higher levels of knowledge and experience in teaching more generic skills
- more explicit profiling within training packages
- improvements in how generic skills are explained and assessed.

In their questionnaire, teachers were asked: 'In your opinion, how can generic skills be better facilitated through VET subjects, VET courses, and in training packages?' In their comments, teachers wrote about the need for greater specification of the skills, and these included:

> clearer specification of the generic skill in the course outcomes
>
> more detailed content, clarification and examples
>
> Generic skills need to be more explicitly embedded in the course but not to the extent that they take the place of vocational skills.

Related to the view about this level of specification was the view that generic skills need to be taught in discrete units, with in-depth content and underpinning knowledge. Many teachers believed that at present, as they exist in training packages, generic skills are lost and not seen to be important.

On the issue of separate modules or special packages, teachers mentioned:

> Perhaps we need to develop a generic skills subject or module that all students must achieve to gain the qualification.
>
> Generic skills need to be taught and identified as separate competencies (as per the national communication skills modules).

Teachers also suggested the need for greater collaboration between the developers of training packages and teachers of general education (those who focus on the development of generic

skills), and employers (who know the generic skills that are most valued in the workplace). Others emphasised the need for generic skills to be assessed on a more regular basis. This and other actions would, as one teacher wrote, give 'more emphasis to their importance'.

In the survey responses, many teachers emphasised the need for better teachers or specialists as a key aspect of raising the importance of developing generic skills in learners. Comments included:

> … a key is having good teachers who integrate both the delivery and the assessment to stimulate or exploit the workplace environment, where both specialist and generic skills are used in conjunction.
>
> We need to have specialist teachers in the literacy and communications, and numeracy and maths, areas.

Some teachers believed that little use was being made of a rich and varied literature on learning models, learning styles, creativity and innovation that could help new teachers in how they approach the development of technical as well as more generic skills in their students. Interestingly, one TAFE, in co-operation with another organisation, is piloting a set of innovation competency standards for entry-level employees and managers. Innovation is listed in the Kearns' (2001) report as a generic skill that sits in the enterprise, innovation and creativity skills cluster. This 'innovation at work' skills package involves a six-step process that parallels ideas presented in the skills and learning literatures. The process—interpretation; conceptualisation and generation of ideas; reflection, collaboration and networking to share ideas and to gain feedback, representation or presenting and selling these ideas; and evaluation—provides an example of a teaching model that might apply to the development of other generic skills.

5 Strategies for the advancement of generic skills

In this final chapter, I outline a variety of strategies that can be considered for facilitating the further development of generic skills in vocational education and training. These insights emerge both from the review of literature and the findings of the current project. In summary, these strategies are focussed upon:

- professional development of VET teachers
- continued industry involvement
- greater promotion to teachers and learners of the value of generic skills
- updating existing training packages.

Professional development of VET teachers

The current research, together with other reports (for example, Down 2002; Jasinski 1996; Mitchell & Young 2001), again highlights the need for the effective professional development of VET staff including sessional staff. The current research reveals that a student-focussed approach to learning, delivered by highly skilled teachers, is central to the successful development of generic skills in learners. Teachers need to have the training and skills to be able to deliver in class effectively, and to be able to use training packages and related assessment to their maximum advantage. There is a need for improved training for new teachers and professional development for current teachers in the use of a wider range of models of teaching and learning, including student-focussed and flexible learning modes in which the teacher is an enabler or coach rather than the expert.

Teachers have reported in this project that to successfully introduce the concept of generic skills the teacher needs to be more flexible and skilled in a wider variety of learning strategies that facilitate the identification of students' developmental needs in terms of generic skills. Teachers also need professional development to provide consistent assessment of generic skills. In particular, the use of portfolio assessment, which students in this project liked, requires support packages so that teachers can assist students in developing evidence-based portfolios.

Industry involvement

Related to professional development of VET teachers is the need for teachers to have more regular contact with industries to determine the generic skills that are required, and the learning and assessment processes on and off the job that can be used to develop those skills in students. Teachers will need additional help and support in developing the knowledge and skills to integrate, more than they are at present, generic skills into current teaching practices. Continued partnerships with industry will be critical to identifying the key generic skills that they require in their employees, and potential strategies on and off the job for developing the more generic skills in learners.

Promotion of the value of generic skills

There is a need for greater promotion of the value and importance of generic skills to teachers and students. There is currently some confusion about the wide range of terms being used, and students do not recognise the term generic skills as well as do teachers. The sector needs to decide whether its preferred term is 'employability skills' or 'generic skills' before a more active promotional campaign begins.

A major finding from the current project is that teachers and students have shared ideas about which generic skills are currently taught well and taught poorly, and those that are important to industry. This list of skills should be used as further input into frameworks being promoted to identify the generic skills that need to be built more strongly into VET programs and training packages. While the better promotion of the benefits of higher levels of employability and career mobility is suggested, fostering generic skills requires changes to the motivations of students. Learners need to take responsibility for their own learning, especially if their personal goals involve establishing the habits of lifelong learning. The Business Council of Australia and Australian Chamber of Commerce and Industry report (Curtis & McKenzie 2001) also addresses this issue. Among their suggested strategies is that, if employers demand evidence of employability skills among job applicants, these job applicants will pressure training providers to teach, assess and certify these skills more than they are certified at present.

While this might be labelled a 'stick' approach, we need to better understand other ways or incentives (that is, a 'carrot' approach) that will encourage students to be better motivated to acquire more generic skills to aid their employability and prospects of securing the jobs they want. In the current project, students tended to favour learning job-specific skills over generic skills. One strategy is to introduce students more to models and ideas about how we learn. Once students better understand their preferred learning style or approaches to learning, they should be better motivated to want to understand and to be more involved with their teachers in the learning process. Understanding how they learn should encourage a more holistic approach that gives increased attention to the value of developing generic skills as well as technical skills.

As the current project identifies, the assessment of generic skills encourages less motivated students to put more effort into developing not only technical but also more generic skills. Assessment reinforces the validation of what students learn, and is a key learning device. Teachers focussed in the current project upon the challenges of assessing more generic skills. Again professional development of teaching staff is required to build their confidence about assessment methods in this area. Separate assessment of generic skills would also make more explicit the transferable nature of these skills, and would contribute to building the levels of confidence among students, and in turn among employers, that students are mastering the complexities of generic skills such as being an effective team member, communicator and problem-solver.

Updating existing training packages

Guidelines need to be produced for the developers of training packages that state which skills are important and how generic skills can be built into training packages. A related issue involves guidelines about the assessment and reporting of generic skills. Clayton (2002), for example, has recommended the development of products that provide advice on quality evidence, moderation of assessment and quality assessment tools. In addition, materials are required to support training and professional development for assessors who are assessing not only technical skills but will increasingly be focussed upon assessing the development of more generic skills. Overall, there is a need now to move beyond debates about the definitions of generic and employability skills to the strategies for helping teachers to identify, promote, assess and certify generic skills.

Also, there needs to be a planned approach to targeting and updating existing training packages in order to improve the identification and facilitation of generic skills development. Linked to this development is an even greater focus upon the learner. In particular, there needs to be increased support for learners in determining what skills they do have, and in developing a plan for developing those skills further.

The current project provides further evidence of which generic skills matter the most according to teachers and students, and therefore which generic skills need to be given a higher profile in existing training packages. A key issue to be debated further is how to develop such generic skills more explicitly in training packages. The pragmatic, or bolt-on, approach is to create the equivalent of a training package that specifies the assessment of generic skills. An alternative is a more holistic model in which generic skills are part of existing training packages, but their presence and assessment is made much more explicit and important than at present.

References

Allen Consulting Group 1999, *Training to compete: The training needs of industry, a report to the Australian Industry Group*, Australian Industry Group, North Sydney.

Callan, VJ 2001, *What are the essential capabilities for those who manage training organisations?*, Australian National Training Authority, Adelaide.

Callan, V J & Terry, D J 1997, 'Employee adjustment to a large-scale organisational change', *Australian Psychologist*, vol. 32, pp.203–210.

Corben, H & Thomson, K 2001, *What makes a great teacher? Attributes of excellence in VET*, North Coast Institute of TAFE, New South Wales Department of Education, Sydney.

Clayton, B 2002, 'Impacting on policy and practice: Implications of assessment research', paper presented at the 11th National VET Research Conference, Brisbane, 10–12 July.

Curtis, D & McKenzie, P 2001, *Employability skills for Australian industry: Literature review and framework development*, Australian Council for Educational Research, Melbourne.

Down, CM 2000, 'Key competencies in training packages', paper presented at the National Centre for Vocational Education Research Annual Research Update Conference, Adelaide.

Down, CM 2002, 'Qualitative impact of training packages on vocational education and training clients', paper presented at the 11th National VET Research Training Conference, Brisbane, 10–12 July.

Droege & Comp. 1999, *Worldwide study on innovation, Australian edition: Barriers to success factors of innovation*, Droege & Comp., Canberra.

Gallois, C & Callan, VJ 1997, *Culture and communication: A guidebook for practice*, John Wiley & Sons, London.

Golding, B, Marginson, S & Pascoe, R 1996, *Changing context, moving skills: Generic skills in the context of credit transfer and the recognition of prior learning*, Australian Government Publishing Service, Canberra.

Green, F 1999, *The market value of generic skills*, Skills Task Force, research paper no. 8, September.

Hager, P, Garrick, J & Risgalla, R 2001, 'Soft skills for hard hats', *Australian Training Review*, March, pp.32–35.

Handy, C 1995a, *The empty raincoat*, Harvard Business School Press, Boston.

Handy, C 1995b, *The age of unreason*, Harvard Business School Press, Boston.

Innovation Summit Implementation Group 2000, *Innovation: Unlocking the future*, Goanna Print, Canberra.

Jasinski, M 1996, *Teaching and learning the key competencies in vocational education and training*, Open Learning Unit, Douglas Mawson Institute of TAFE, Department for Employment, Training and Further Education, Adelaide.

Karpin, D 1995, *Enterprising nation: Renewing Australia's managers to meet the challenges of the Asia-Pacific century*, Report of the Industry Task Force on Leadership and Management Skills (the Karpin Report), Australian Government Publishing Service, Canberra.

Kearns, P 2001, *Generic skills for the new economy: A review of research relating to generic skills*, National Centre for Vocational Education Research, Adelaide.

Marsh, C 1997, *Perspectives: Key concepts for understanding curriculum*, Falmer Press, London.

Mayer, E 1992, *Key competencies: Employment-related key competencies for post-compulsory education and training*, report to the Australian Education Council and Ministers of Vocational Education, Employment and Training, Melbourne.

Mitchell, J & Young, S 2001, *High-skilled high-performing VET*, Australian National Training Authority, Brisbane.

NCVER 2001, *Statistics 2001: Survey of employer views on vocational education and training: National report*, National Centre for Vocational Education Research, Adelaide.

Scollay, M 1999, 'Challenges and prospects for Australian training: An interview with Moira Scollay', *Training Agenda*, vol. 7, pp.28–29.

Senge, P 1990, *The fifth discipline*, Doubleday, New York.

Senge, P, Kleiner, A, Roberts, C, Roth, G, Ross, R & Smith, B 1999 *The dance of change: The challenges to sustaining momentum in learning organizations*, Nicholas Brealey Publishing, London.

Terry, DJ & Callan, VJ 1998, 'Intergroup differentiation in response to an organisational merger', *Group Dynamics: Theory, Research, and Practice*, vol. 2, pp.67–87.

Terry, DJ, Carey, CJ & Callan, VJ 2001, 'Employee adjustment to an organisational merger: An intergroup perspective', *Personality and Social Psychology Bulletin*, vol. 27, pp.267–280.

UK National Skills Task Force 1998, *Towards a national skills agenda*, National Skills Task Force, London.

US Secretary of Labor 1999, *Identifying and describing the skills required by work*, Secretary's Commission on Achieving Necessary Skills, US Department of Labor, Washington.

Appendix A: Teacher and student interview schedules

Teacher interview schedule

Q. Can you please tell me a little about your background, including where you currently teach, and the programs you teach into. If you are not currently teaching, tell me a little about your teaching background, and about your current role.

Q. What is your past experience with the concept of generic skills? Is it a concept you have heard about in the past? What is your current level of knowledge and experience with the concept of generic skills?

Q. What are your views about how well generic skills are being developed and assessed in the training packages that are most relevant to the industry you most associate with?

Q. What generic skills do you think are most important to teachers, students and to industry in general?

Q. Given your understanding and experience with generic skills, how do you think they can be better facilitated or developed in learners?

Q. What else did you think I was going to talk to you about, but have not? Let's now address those issues also.

Student focus group interview schedule

Q. What course are you currently completing as a student?

Q. What are you trying to achieve or become as a result of your training at TAFE?

Q. What do you think teachers or employers mean when they talk about generic skills?

Q. Now that we have talked about generic skills (and I have explained what they are typically about), what types of generic skills do you want to gain through your training?

Q. How do you think these types of skills [the interviewer used the phrases 'generic skills' and 'employability skills' interchangeably in the interviews with students], might be best promoted as being important to students?

Q. What else did you think I was going to talk to you about, but have not? Let's now talk about those issues also.

Appendix B: Teacher and student survey questionnaires

VET TEACHER SURVEY

Dear Teacher

Aims of this Survey Questionnaire. The aim of the questionnaire is to gain VET teacher attitudes about generic skills or employability skills. This project is one of four nationwide studies sponsored by the National Research and Evaluation Committee (NREC). Your institution has received numerous copies of this questionnaire, and is assisting me by sending copies to key teaching staff who are currently actively involved in classroom teaching. Findings from this survey and related studies will inform debate and ultimately policy in the area of generic skills. I hope you can now work through these questions – it will require only about 15 minutes of your time.

Instructions. Please complete this questionnaire at work or at home. Return the completed questionnaire to me in the postage-paid return-addressed envelope attached at the back of the questionnaire.

Confidentiality and Related Issues

- This survey of current classroom teachers is being completed in all Australian States and Territories
- Confidentiality is assured. Do not attach your name to the completed questionnaire, and return it in the envelope provided
- Only Victor Callan will see the completed questionnaires
- Participation in the study is voluntary. You have the right not to complete this questionnaire if you choose to
- Once entered into the computer, all questionnaires will be destroyed
- Your institution will be emailed an executive summary of the draft final report based on this survey by August 2002. It will be asked to circulate this to all staff, and interested staff can then contact me for an electronic copy of the full report
- If you have any questions about this survey, please contact me, on tel. 07 3365 9009, or email v.callan@gsm.uq.edu.au

Please complete and return this questionnaire in the envelope provided as soon as possible or by 17th May 2002. Many thanks,

Professor Victor J Callan, Chief Investigator

PART A – BACKGROUND INFORMATION

Responses to these questions will be used to describe in general terms the characteristics of teachers who completed this survey questionnaire.

Q1. **Are you?** (please circle 1 or 2)

1. Male 2. Female

Q2. **In what State or Territory do you live?** (please circle a number)

1. Queensland 2. New South Wales 3. ACT

4. Victoria 5. Tasmania 6. South Australia

7. Western Australia 8. Northern Territory

Q3. **What type of institution do you teach in?** (please circle a number)

1. TAFE College 2. Private College 3. Other (please write in) _____

Q4. **Are you employed as a teacher?** (please circle a number)

1. Full-time 2. Part-time 3. Casual

4. Other (please write in) _____

Q5. **What industry sector or sectors employ the majority of students that you currently teach?** (please write in, e.g. hospitality, IT, tourism, etc)

_____

_____

Q6. **What mode of delivery do you predominantly use in your current teaching?** (please circle a number)

1. Face-to-face classroom teaching 2. In the workplace 3. External/on-line

4. Mixed mode 5. Other _____

Q7. **What is the level of students that you teach most often in your current teaching role?** (please circle a number)

1. Certificate 1 2. Certificate 2 and 3 3. Certificate 3 4. Certificate 4

5. Diploma 6. Advanced Diploma 7. Other _____

PART B – SKILLS AND SKILL DEVELOPMENT

Q1. Please indicate your level of knowledge about the following terms? (please circle a number for each item using the scale from 1 to 3)

	Don't know this term	Know this term, but don't understand it fully	Know and fully understand this term
Generic skills	1	2	3
Mayer competencies	1	2	3
Core skills	1	2	3
'Soft' skills	1	2	3
'Hard' skills	1	2	3
Transferable skills	1	2	3
Work skills	1	2	3
Employability skills	1	2	3
Life skills	1	2	3

Q2. What would you list under the term generic skills? (please write down anything that comes to mind)

_____

_____

Q3. Below is a list of skills, traits and attributes. Think about the major program that you are currently teaching into. Please indicate the level of importance you attach to students gaining each of these skills/traits/attributes by the time they finish their training. (circle a number from 1 to 4 for each item)

	Not Important	Slightly Important	Important	Very Important
1. Being able to read, spell and write well	1	2	3	4
2. Being able to use mathematical ideas and techniques	1	2	3	4
3. Being able to solve problems	1	2	3	4
4. Being able to use information technology	1	2	3	4
5. Being able to understand how ideas and systems are linked to each other	1	2	3	4
6. Being able to collect, analyse and organise information	1	2	3	4

7. Being able to speak and communicate well with other people	1	2	3	4
8. Being able to understand and communicate with people from other cultures	1	2	3	4
9. Being able to work with other people in teams	1	2	3	4
10. Being able to build and manage a team of people	1	2	3	4
11. Being able to solve conflicts	1	2	3	4
12. Being a good manager of their time	1	2	3	4
13. Having a customer focus	1	2	3	4
14. Being creative and innovative in their thinking	1	2	3	4
15. Being able to reflect upon what and how they learn	1	2	3	4
16. Being able to plan and organise activities	1	2	3	4
17. Having work and study skills	1	2	3	4
18. Having a practical focus	1	2	3	4
19. Being self-confident	1	2	3	4
20. Being able to change how they think and behave	1	2	3	4
21. Being able to complete a task when there is incomplete information	1	2	3	4
22. Knowing how they learn best about new skills or ideas	1	2	3	4
23. Being ethical	1	2	3	4
24. Being able to challenge how things are done	1	2	3	4
25. Being motivated	1	2	3	4
26. Being adaptable to change at work	1	2	3	4

Q4. While there is still debate about the term, consider the list in Q3 as a draft statement of the wide range of skills that can be called generic skills. What other skills/traits/attributes not listed in Q3 do you think are important for the type of job or career you train your students for?

_____

_____

_____

Q5. **Please look again at the list in Q3. Each item has a number in front of it (e.g. 13. Having a customer focus; 19. Being self-confident). What top 5 skills/traits/attributes do you believe your industry program is developing well in your students? For example, if the program is doing very well in helping students develop a customer focus, insert 13 in one of the five spaces. The industry program, that I teach predominantly in, is <u>doing well</u> in teaching students to:** (insert 5 numbers from 1 to 26)

_____ _____ _____ _____ _____

Q6. **On the other hand, this industry program is <u>doing poorly</u> in teaching students to:** (insert 5 numbers from 1 to 26)

_____ _____ _____ _____ _____

Q7. **Finally, from this same list, in your opinion what 5 are most important to your industry?** (insert 5 numbers again from this list from 1 to 26)

_____ _____ _____ _____ _____

PART C – GENERAL ATTITUDES

Q1. **Below are a series of statements. Please circle a number from 1 to 6 to indicate how much you agree or disagree with each statement. Answer according to your first reaction to the statement. If you do not have an opinion about a statement, or is not relevant to your current role, then please leave the item out.**

	Strongly Disagree					Strongly Agree
I believe I am very clear in explaining why it is important to learn generic skills	1	2	3	4	5	6
Students understand how the assessment is being used to test if they have achieved competence in a generic skill	1	2	3	4	5	6
Students only want to learn the skills that they believe are relevant to the job or industry they want to work in	1	2	3	4	5	6
Students want to learn a broad set of skills that will allow them to change jobs or industries	1	2	3	4	5	6
My industry wants students who have broad generic skills rather than only specialist skills	1	2	3	4	5	6
I assess and report on generic skills	1	2	3	4	5	6
Our industry training package clearly describes the generic skills required	1	2	3	4	5	6
The training package for my industry does a good job in embedding generic skills						
- in the content	1	2	3	4	5	6
- in the processes described	1	2	3	4	5	6
- in the assessment guidelines	1	2	3	4	5	6
Our industry training package is helping to produce graduates who are highly employable in a range of jobs in different industries	1	2	3	4	5	6
There are guidelines in our industry training package that help me assess generic skill development in my students	1	2	3	4	5	6

Q2. **In your opinion, how can generic skills be better facilitated through VET subjects, VET courses, and in training packages?**

Q3. **Think of the skill, 'being able to work with other people in teams'.**

In your classes, this skill is being developed in your students by: (explain briefly what you do)

In your assessment, this skill is being assessed in your students by: (explain briefly)

On-the-job, this skill is being developed in your students by: (explain briefly)

PART D – FINAL COMMENTS

Below is a space in which you can provide any other ideas or thoughts you have about generic skills, skill development, training packages, teacher training and so on. You can use the back of this page as well

Thank you for completing this questionnaire. Please insert the completed questionnaire in the envelope provided. Postage is pre-paid, and my address is on the envelope.

STUDENT SURVEY

Dear Student

Aims of this Survey Questionnaire. This questionnaire asks about your experiences as a student, and the skills you think you need to develop to get a job.

Instructions. Please complete this questionnaire as soon as you receive it. Once you have completed the questionnaire, please return it to your class teacher/instructor.

Confidentiality and Related Issues

- This student survey is being conducted in all Australian States and Territories. Your institution has agreed to be involved in this survey
- Participation in the study is voluntary. You have the right not to complete the questionnaire if you choose to
- Work through the questions as quickly as possible – go on your first reactions in answering a question
- Try to answer every question
- Do not attach your name to the completed questionnaire
- Once entered into the computer, all questionnaires will be destroyed

Findings from the student survey will be reported to the State and Federal Government Departments interested in youth employment. The findings will also be published for circulation to TAFE institutions, private institutions and the general public.

PART A – BACKGROUND INFORMATION

Responses to these questions will be used to describe in general terms the types of students who completed the questionnaire.

Q1. **Are you?** (please circle 1 or 2)

1. Male 2. Female

Q2. **In what State or Territory do you live?** (please circle a number)

1. Queensland 2. New South Wales 3. ACT
4. Victoria 5. Tasmania 6. South Australia
7. Western Australia 8. Northern Territory

Q3. **Approximately how much of your studies have you now completed? If you are just beginning, circle a number like 10, 20, or 30 percent. If you are nearly finished your studies, consider circling one number from 70, 80 or 100 percent.** (please circle one number only)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Q4. **What type of institution do you attend?** (please circle a number)

1. TAFE College 2. Private College 3. Other (please write in) _____

Q5. **What qualification will you obtain upon completion of your studies?** (please circle a number)

1. Certificate 1 2. Certificate 2 3. Certificate 3

4. Certificate 4 5. Diploma 6. Advanced Diploma

7. Other (please write in) _____

Q6. **Are you completing a traineeship or apprenticeship?** (please circle a number)

1. No 2. Yes, completing a traineeship 3. Yes, completing an apprenticeship

Q7. **What industry are you doing your traineeship or apprenticeship in?** (please write in below)

_____

PART B – SKILLS AND SKILL DEVELOPMENT

Q1. **Have you heard of the following terms?** (please circle 1 or 2 for each item)

Generic Skills	1. Yes	2. No
Core Skills	1. Yes	2. No
Key Competencies	1. Yes	2. No
Employability Skills	1. Yes	2. No

Q2. **Circle a number from 1 to 4 to indicate how important these skills are for the type of job you want to get.**

	Not Important	Slightly Important	Important	Very Important
1. Being able to read, spell and write well	1	2	3	4
2. Being able to use mathematical ideas and techniques	1	2	3	4
3. Being able to solve problems	1	2	3	4
4. Being able to use information technology	1	2	3	4
5. Being able to understand how ideas and systems are linked to each other	1	2	3	4
6. Being able to collect, analyse and organise information	1	2	3	4
7. Being able to speak and communicate well with other people	1	2	3	4
8. Being able to understand and communicate with people from other cultures	1	2	3	4
9. Being able to work with other people in teams	1	2	3	4
10. Being able to build and manage a team of people	1	2	3	4
11. Being able to solve conflicts	1	2	3	4
12. Being good at managing your time	1	2	3	4

13. Having a customer focus	1	2	3	4
14. Being creative and innovative in your thinking	1	2	3	4
15. Being able to reflect upon what and how you are learning	1	2	3	4
16. Being able to plan and organise activities	1	2	3	4
17. Having good work and study skills	1	2	3	4
18. Having a practical focus	1	2	3	4
19. Being self-confident	1	2	3	4
20. Being able to change how you think and behave	1	2	3	4
21. Being able to complete a task when there is incomplete information	1	2	3	4
22. Knowing how you learn best	1	2	3	4
23. Being ethical	1	2	3	4
24. Able to challenge how things are done	1	2	3	4
25. Being motivated	1	2	3	4
26. Being adaptable to change at work	1	2	3	4

Q3. What other skills, not listed from 1 to 26 above, do you think are important for the type of job or career you want to do?

_____

_____

_____

_____

Q4. In Q2 above, each skill or trait has a number in front of it (e.g. 1. Being able to read, spell and write; 13. Having a customer focus). Think about your current studies. What top 5 skills or traits is the industry program really teaching you well? Insert up to 5 numbers from 1 to 26 in the five spaces below. For example, if the course is helping you to be self-confident, you would insert 19 in one of the five spaces.

The industry program is doing well in teaching me: (insert 5 numbers from 1 to 26 from Q2 above)

_____ _____ _____ _____ _____

Q5. On the other hand, the industry program is doing poorly in teaching me (insert 5 numbers from 1 to 26 from Q2 above)

_____ _____ _____ _____ _____

Q6. Finally, of the 26 skills or traits in Q2, in your opinion what five are the most important for a job in your chosen industry? (insert 5 numbers from 1 to 26)

_____ _____ _____ _____ _____

PART C – ATTITUDES ABOUT TEACHERS, TEACHING STYLES AND ASSESSMENT

Q1. Below are a series of statements. Please circle a number from 1 to 6 to indicate how much you agree or disagree with each statement. Go on your first reaction to each statement.

	Strongly Disagree					Strongly Agree
Teachers are very clear in explaining why it is important to be learning certain skills	1	2	3	4	5	6
I enjoy the activities we do in class to help us develop new skills	1	2	3	4	5	6
I understand how the assessment is used to test if I have achieved competence or not in a new skill	1	2	3	4	5	6
I only want to learn skills that are relevant to the job or industry I want to work in	1	2	3	4	5	6
I want to learn a broad set of skills that will allow me to change jobs or industries if and when I want to	1	2	3	4	5	6
I think our teachers are innovative in how they help us learn new skills	1	2	3	4	5	6
Teachers have a very practical focus in what they teach us	1	2	3	4	5	6

Q2. Think of the skill, 'being able to work with other people in teams'. In the classroom, this skill is being developed in your classes by: (insert any ideas you have)

_____

_____

On-the-job, this skill is being developed by: (insert any ideas you have)

_____

_____

Q3. What changes would you like to see in how you are currently being taught various skills? For instance, how can things be done differently or better? (please write in the space anything that comes to mind)

_____

_____

_____

PART D – FINAL COMMENTS

Below is a space in which you can provide any other ideas that you think might be useful for improving your experiences as a student and a learner.

Thank you for completing this questionnaire. Please return it to your classroom teacher or instructor.

Appendix C: Tables from the teacher and student surveys

Table 1: Sex—teacher sample

	Frequency	Per cent
Male	58	55.2
Female	47	44.8
Total	**105**	**100.0**

Table 2: Location—teacher sample

	Frequency	Per cent
Qld	20	19.0
NSW	43	41.0
Vic.	20	19.0
SA	6	5.7
WA	11	10.5
NT	5	4.8
Total	**105**	**100.0**

Table 3: Type of institution—teacher sample

	Frequency	Per cent
TAFE	101	96.2
Private institution	0	0.0
Other	4	3.8
Total	**105**	**100.0**

Table 4: Employment—teacher sample

	Frequency	Per cent
Full-time	77	73.3
Part-time	19	18.1
Casual	3	2.9
Other	6	5.7
Total	**105**	**100.0**

Table 5: Mode of teaching—teacher sample

	Frequency	Per cent
Face-to-face classroom teaching	76	72.4
In the workplace	7	6.7
External/Online	1	1.0
Mixed mode	19	18.1
Other	2	1.9
Total	**105**	**100.0**

Table 6: Teaching level—teacher sample

	Frequency	Per cent
Certificate 1	13	12.4
Certificate 2	16	15.2
Certificate 3	28	26.7
Certificate 4	14	13.3
Diploma	25	23.8
Advanced Diploma	2	1.9
Other	7	6.7
Total	**105**	**100.0**

Table 7: Sex—student sample

	Frequency	Per cent
Male	433	57.4
Female	322	42.6
Total	**755**	**100.0**

Table 8: Location—student sample

	Frequency	Per cent
Qld	211	27.9
NSW	289	38.3
Vic.	136	18.0
WA	88	11.7
NT	31	3.1
Total	**755**	**100.0**

Table 9: Type of institution—student sample

	Frequency	Per cent
TAFE	739	97.9
Private institution	1	.1
Other	15	2.0
Total	**755**	**100.0**

Table 10: Level of qualification—student sample

	Frequency	Per cent
Certificate 1	71	9.6
Certificate 2	65	8.8
Certificate 3	154	20.8
Certificate 4	102	13.8
Diploma	277	37.4
Advanced Diploma	38	5.1
Other	34	4.6
Total	**741**	**100.0**

Note: 14 respondents did not answer.

Table 11: Progress of studies—student sample

Per cent completion	Frequency	Per cent
0	30	4.0
10	99	13.1
20	167	22.1
30	125	16.6
40	57	7.5
50	78	10.3
60	42	5.6
70	91	12.1
80	37	4.9
90	20	2.6
100	9	1.2
Total	**755**	**100.0**

Table 12: Traineeship/Apprenticeship—student sample

	Frequency	Per cent
No	629	85.5
Traineeship	21	2.9
Apprenticeship	86	11.7
Total	**736**	**100.0**

Note: 19 respondents did not answer.

Table 13: Training industry—student sample

	Frequency	Per cent
Engineering/Metal fabrication	26	12.9
Information technology	9	4.5
Aquaculture	5	2.5
Business marketing/Media industry	2	1.0
Building/Carpentry	34	16.8
Hairdressing	12	5.9
Hospitality/Tourism	10	5.0
Beauty therapy	1	.5
Police service	1	.5
Business management	4	2.0
Electrical/Plumbing	19	9.4
Land management	2	1.0
Wooden boat building/Ship wrighting	5	2.5
Mechanical fitting/Mechanical engineering	8	4.0
Hydraulics	2	1.0
Youth worker/Community service	7	3.5
Manufacturing	1	.5
Child care/Teaching	9	4.5
Horticulture	7	3.5
Interior design/Graphic design	3	1.5
Science	1	.5
Commercial cookery	2	1.0
Nursing	4	2.0
Health	1	.5
Environmental technology	1	.5
Telecommunication	2	1.0
Music	1	.5
Aircraft maintenance engineering/Aerospace engineering	19	9.4
Mining	1	.5
Fashion	3	1.5
Total	**202**	**100.0**

Note: 553 respondents did not answer.

Table 14a: Knowledge of skills—teacher sample (per cent indicating they know and fully understand each term)

	Per cent
Generic skills	80.0
Mayer competencies	41.0
Core skills	80.0
'Soft' skills	41.9
'Hard' skills	40.0
Transferable skills	78.1
Work skills	82.9
Employability skills	76.2
Life skills	83.8

Table 14b: Knowledge of skills—student sample (per cent indicating they had heard of each term)

	Per cent
Generic skills	58.6
Core skills	67.6
Key competencies	73.3
Employability skills	75.4

Table 15a: General attitudes—teacher sample (per cent agreeing to each statement)

	Per cent
I believe I am very clear in explaining why it is important to learn generic skills	87.0
Students understand how the assessment is being used to test if they have achieved competence in a generic skill	77.3
Students only want to learn the skills that they believe are relevant to the job or industry they want to work in	80.4
Students want to learn a broad set of skills that will allow them to change jobs or industries	53.4
My industry wants students who have broad generic skills rather than only specialist skills	68.4
I assess and report on generic skills	60.0
Our industry training package clearly describes the generic skills required	51.1
The training package for my industry does a good job in embedding generic skills:	
✧ in the content	53.8
✧ in the processes described	56.7
✧ in the assessment guidelines	54.9
Our industry training package is helping to produce graduates who are highly employable inn a range of jobs in different industries	46.2
There are guidelines in our industry training package that help me assess generic skill development in my students	46.7

Table 15b: General attitudes—student sample (per cent agreeing to each statement)

	Cert. 1 & 2	Cert. 3+	Total
Teachers are very clear in explaining why it is important to be learning certain skills	87.2	74.5	**76.0**
I enjoy the activities we do in class to help us develop new skills	86.3	80.7	**81.7**
I understand how the assessment is used to test if I have achieved competence or not in a new skill	85.0	82.9	**83.3**
I only want to learn skills that are relevant to the job or industry I want to work in	58.3	59.6	**59.3**
I want to learn a broad set of skills that will allow me to change jobs or industries if and when I want to	84.8	80.1	**80.9**
I think our teachers are innovative in how they help us learn new skills	82.3	80.7	**81.0**
Teachers have a very practical focus in what they teach us	89.6	80.9	**82.6**

Table 16a: Per cent of respondents listing skills as taught well, taught poorly, and important for their industry, corrected for primacy effect*—teacher sample

		Taught well	Taught poorly	Important to industry
1.	Being able to read, spell and write well	7.7	**26.7**	**22.9**
2.	Being able to use mathematical ideas and techniques	5.4	16.8	13.0
3.	Being able to solve problems	**30.8**	3.1	**41.2**
4.	Being able to use information technology	17.1	15.2	19.0
5.	Being able to understand how ideas & systems are linked to each other	8.1	11.9	6.2
6.	Being able to collect, analyse and organise information	23.0	2.1	14.4
7.	Being able to speak and communicate well with other people	**36.9**	6.5	**40.8**
8.	Being able to understand & communicate with people from other cultures	10.9	**21.4**	8.0
9.	Being able to work with other people in teams	**35.3**	0.0	**33.4**
10.	Being able to build and manage a team of people	1.6	20.6	1.6
11.	Being able to solve conflicts	5.0	21.2	11.7
12.	Being a good manager of their time	11.4	16.1	15.2
13.	Having a customer focus	22.4	17.7	16.7
14.	Being creative and innovative in their thinking	12.5	21.1	12.5
15.	Being able to reflect upon what and how they learn	14.1	7.4	11.2
16.	Being able to plan and organise activities	**27.1**	5.2	20.4
17.	Having work and study skills	12.4	13.4	10.5
18.	Having a practical focus	**37.8**	10.2	18.7
19.	Being self-confident	27.0	7.9	20.3
20.	Being able to change how they think and behave	8.5	**24.7**	8.5
21.	Being able to complete a task when there is incomplete information	11.0	**25.3**	14.8
22.	Knowing how they learn best about new skills or ideas	7.8	15.4	6.8
23.	Being ethical	17.0	20.8	22.7
24.	Being able to challenge how things are done	10.9	**24.2**	11.8
25.	Being motivated	17.2	13.4	**22.9**
26.	Being adaptable to change at work	18.7	15.9	**24.5**

Note: The top five responses in each column are highlighted.

* A problem with such ratings is that since the task required respondents to repeatedly scan through a single list to pick their top five, it was likely that the skills listed earlier in the list would appear more frequently in the responses. Skills listed further down the list would be likely to appear less frequently. This type of skewing on the basis of position within a list is known as a primacy effect. A review of the skills selected by both teachers and students confirmed that a primacy effect was likely to be present in these data. In order to counter this effect and present an unskewed representation of responses, the data were mathematically corrected to remove the effect of position within the list of skills. This correction had the effect of decreasing the percentages of people selecting skills earlier in the list, and increasing the percentages of people selecting skills later in the list. Such corrected ratings are shown in table 17a for teachers and table 17b for students.

Table 16b: Per cent of respondents listing skills as taught well, taught poorly, and important for a job in their industry, corrected for primacy effect*—student sample

		Taught well	Taught poorly	Important for job in industry
1.	Being able to read, spell and write well	9.6	5.2	17.1
2.	Being able to use mathematical ideas and techniques	11.2	11.7	12.9
3.	Being able to solve problems	21.1	0.0	**24.2**
4.	Being able to use information technology	13.9	12.1	14.1
5.	Being able to understand how ideas & systems are linked to each other	14.1	4.2	9.5
6.	Being able to collect, analyse and organise information	**23.8**	3.3	17.3
7.	Being able to speak and communicate well with other people	**34.3**	0.0	**37.1**
8.	Being able to understand & communicate with people from other cultures	9.0	12.3	13.7
9.	Being able to work with other people in teams	**41.5**	0.0	**29.8**
10.	Being able to build and manage a team of people	9.2	10.1	7.6
11.	Being able to solve conflicts	7.3	12.6	10.1
12.	Being a good manager of their time	20.9	8.0	16.8
13.	Having a customer focus	8.2	12.3	12.7
14.	Being creative and innovative in their thinking	15.5	8.7	11.9
15.	Being able to reflect upon what and how they learn	7.5	11.2	1.4
16.	Being able to plan and organise activities	16.5	10.0	14.2
17.	Having work and study skills	17.2	10.6	8.9
18.	Having a practical focus	12.6	10.7	9.8
19.	Being self-confident	**21.7**	12.5	**21.6**
20.	Being able to change how they think and behave	8.2	10.2	6.3
21.	Being able to complete a task when there is incomplete information	11.4	**15.9**	9.1
22.	Knowing how they learn best about new skills or ideas	7.6	**21.8**	4.3
23.	Being ethical	9.7	15.8	13.0
24.	Being able to challenge how things are done	9.1	**18.9**	8.3
25.	Being motivated	**23.3**	**16.1**	**21.6**
26.	Being adaptable to change at work	14.5	**17.5**	13.4

Note: The top five responses in each column are highlighted.

* A problem with such ratings is that since the task required respondents to repeatedly scan through a single list to pick their top five, it was likely that the skills listed earlier in the list would appear more frequently in the responses. Skills listed further down the list would be likely to appear less frequently. This type of skewing on the basis of position within a list is known as a primacy effect. A review of the skills selected by both teachers and students confirmed that a primacy effect was likely to be present in these data. In order to counter this effect and present an unskewed representation of responses, the data were mathematically corrected to remove the effect of position within the list of skills. This correction had the effect of decreasing the percentages of people selecting skills earlier in the list, and increasing the percentages of people selecting skills later in the list. Such corrected ratings are shown in table 17a for teachers and table 17b for students.

Table 17a: Rating of skills—teacher sample (per cent listing each skill as 'Very important')

		Per cent
1	Being able to read, spell and write well	58.1
2	Being able to use mathematical ideas and techniques	32.4
3	Being able to solve problems	65.4
4	Being able to use information technology	28.8
5	Being able to understand how ideas and systems are linked to each other	32.4
6	Being able to collect, analyse and organise information	50.5
7	Being able to speak and communicate well with other people	65.7
8	Being able to understand and communicate with people from other cultures	34.3
9	Being able to work with other people in teams	63.8
10	Being able to build and manage a team of people	19.2
11	Being able to solve conflicts	36.2
12	Being a good manager of their time	49.0
13	Having a customer focus	43.8
14	Being creative and innovative in their thinking	36.2
15	Being able to reflect upon what and how they learn	38.5
16	Being able to plan and organise activities	44.8
17	Having work and study skills	45.7
18	Having a practical focus	50.0
19	Being self-confident	47.6
20	Being able to change how they think and behave	42.3
21	Being able to complete a task when there is incomplete information	31.7
22	Knowing how they learn best about new skills or ideas	33.3
23	Being ethical	65.7
24	Being able to challenge how things are done	33.3
25	Being motivated	74.0
26	Being adaptable to change at work	57.3

Table 17b: Rating of skills—student sample (per cent listing each skill as 'Very important')

		Cert. 1 & 2	Cert. 3+	Total
1	Being able to read, spell and write well	58.5	71.9	**69.4**
2	Being able to use mathematical ideas and techniques	51.1	36.9	**39.5**
3	Being able to solve problems	58.5	60.4	**60.1**
4	Being able to use information technology	46.6	37.7	**39.4**
5	Being able to understand how ideas and systems are linked to each other	49.6	40.0	**41.8**
6	Being able to collect, analyse and organise information	39.6	52.4	**50.1**
7	Being able to speak and communicate well with other people	63.4	77.1	**74.6**
8	Being able to understand and communicate with people from other cultures	35.1	50.5	**47.7**
9	Being able to work with other people in teams	64.4	65.8	**65.6**
10	Being able to build and manage a team of people	41.5	43.1	**42.8**
11	Being able to solve conflicts	41.5	49.4	**48.0**
12	Being a good manager of their time	55.2	64.2	**62.6**
13	Having a customer focus	48.5	47.1	**47.4**
14	Being creative and innovative in their thinking	44.4	49.7	**48.8**
15	Being able to reflect upon what and how they learn	37.3	42.4	**41.4**
16	Being able to plan and organise activities	33.6	46.3	**44.0**
17	Having work and study skills	53.0	53.3	**53.2**
18	Having a practical focus	49.6	51.2	**50.9**
19	Being self-confident	61.7	64.7	**64.2**
20	Being able to change how they think and behave	42.9	45.8	**45.3**
21	Being able to complete a task when there is incomplete information	47.4	43.3	**44.1**
22	Knowing how they learn best about new skills or ideas	47.4	42.0	**43.0**
23	Being ethical	44.7	50.8	**49.7**
24	Being able to challenge how things are done	37.0	36.5	**36.6**
25	Being motivated	68.7	72.9	**72.1**
26	Being adaptable to change at work	62.2	60.5	**60.8**

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